

AMENDMENTS TO THE DRAWINGS

The attached replacement sheets of drawings include changes to Fig. 2 and Fig. 3. The replacement sheet including Fig. 2 replaces the original sheet including Fig. 2. The
5 replacement sheet including Fig. 3 replaces the original sheet including Fig. 3.

REMARKS

Election/Restrictions

An election of Species II is made by Applicant in response to election requirements by Examiner in office action dated 01/27/2005. Claims 1-11 are withdrawn.

5 Amendments to the Drawings

Fig. 2 is revised and now labeled as "Fig. 2 Replacement Sheet." Fig. 2 now includes a previously omitted look-up table 50 for storing a table as supported by the specification in paragraph [0062]: "The controller 42 sets other outputs such as...the RF equalizer signal and the DPD equalizer signal according to the calculated target
10 frequency." No new matter is introduced.

Fig. 3 is revised to include the detail that step 114 specifically sets outputs including: RF and DPD equalizer signals. Support for this amendment is found in paragraph [0062] of the specification: "The controller 42 sets other outputs such as the charge
15 pump currents of the frequency detector 32 and the phase detector 34, and the RF equalizer signal and the DPD equalizer signal according to the calculated frequency."

Consideration of the amendments to the drawings is respectfully requested.

Amendments to the Specification

20 The non-descriptive title has been adjusted as per examiner's request. The original title, "OPTICAL DISK DRIVE CONTROL CIRCUIT AND METHOD" is now more descriptively worded as, "METHOD OF CONTROLLING AN OPTICAL DISK DRIVE BY CALCULATING A TARGET FREQUENCY OF A DPLL SIGNAL."
No new matter is introduced.

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The typographical error in paragraph [0056] has been corrected. Before this amendment steps 110 through 114 were disconnected from the flowchart because in paragraphs [0055] and [0056], step 108 directed the flow to step 106 rather than step 110. No new matter is introduced.

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Consideration of the amendments to the specification is respectfully requested.

Amendments to the Claims

Claim 12 is amended to clearly define the step of calculating the target frequency of the DPLL signal in a seek mode. The amendments are fully supported by paragraph [0026]. No new matter is introduced.

- 5 Claim 17 is amended to include limitations of claim 18. No new matter is entered by the amendments to claim 17. Claim 18 is cancelled accordingly.

New claim 19 is entered and combines part of the limitations of claims 12 and 13. The claim 19 is fully supported by specification paragraph [0046]. No new matter is introduced.

- 10 Consideration of the amendments to the claims is respectfully requested.

Response to Claim Rejections

- 15 **Claims 17 & 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.**

Response:

- 20 To comply with the enablement requirement, claim 18 is cancelled and currently amended claim 17 is revised to include utilizing a look-up table to determine the RF equalizer signal and the differential phase detector (DPD) equalizer signal. Amended claim 17 is fully supported by the specification in paragraph [0045]: "the RF equalizer signal and the DPD equalizer signal can also be retrieved from a look-up table, which can be stored in the controller 42, by referencing the target frequency" and Look-up Table 50 shown in amended Fig. 2 .

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Claims 12 – 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Katoh (US 6,088,311).

Response:

Concerning the currently amended claim 12, applicant believes that the present invention would not have been anticipated by a person of ordinary skill in the art at the time the invention was made given the teachings of Katoh.

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In this Office action, the examiner stated that Katoh has taught calculating a target frequency for the DPLL signal. However, applicant believes that examiner misstated the teachings of Katoh. Katoh teaches utilizing the wobble PLL 20a and making the read clock signal RCK synchronized with the wobble signal S1 when the optical disc drive is handling a not-yet-recorded area (col. 13, lines 12-18). As stated in col. 8, lines 17-29, the frequency comparator 15 compares the frequency of the wobble signal S1 with that of the output of the frequency divider 19, and then outputs a frequency error signal representing the frequency displacement between the wobble signal and the output signal of the frequency divider 19 (As shown in Fig. 5, the input of the frequency divider 19 is the read clock signal RCK). Therefore, the frequency of the read clock signal RCK is adjusted by the frequency error outputted from the frequency comparator 15 and is locked when there is no frequency displacement between the wobble signal and the output signal of the frequency divider 19. In other words, the wobble PLL 20a can acknowledge the frequency error only, and is **unable to calculate the frequency of the read clock signal RCK**. In addition, the cited reference contains no description stating operation of the optical disc drive under a seek mode for track seeking. Therefore, Katoh fails to teach or suggest the claimed limitation "calculating a target frequency of the DPLL signal for a target track when the optical disk drive is in a seek mode for seeking the target track." Applicant believes that the rejection under 35 U.S.C. 102(b) is overcome, and amended claim 12 has been placed in condition for allowance.

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Claims 13-17 are dependent on amended claim 12, and should be allowed if amended claim 12 is found allowable.

New claim 19

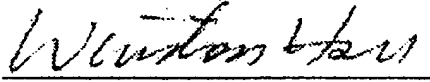
Concerning the newly entered claim 19, applicant believes that the present invention would not have been anticipated by a person of ordinary skill in the art at the time the invention was made given the teachings of Katoh.

- 5 In this Office action, the examiner stated that Katoh has taught detecting the rotation speed of the spindle and generating the DPLL signal when the rotation speed changes. However, applicant believes that examiner misstated the teachings of Katoh. Katoh teaches utilizing the selector 42 to select either the wobble signal S1 or the pseudo wobble signal S4 as an input of the frequency comparator 15. According to Katoh's
- 10 disclosure, if the servo-mechanism performs tracking normally, the wobble signal S1 is selected and used to control the read clock signal RCK; however, if the servo-mechanism fails to perform tracking, the pseudo wobble signal S4 is selected and used to control the read clock signal RCK. **There is no description stating or suggesting detecting changes of the rotation speed of the spindle to control the**
- 15 **read clock signal RCK.** In addition, as mentioned above, the wobble PLL 20a can acknowledge the frequency error only, and is **unable to calculate the frequency of the read clock signal RCK.** Therefore, Katoh fails to teach or suggest the claimed limitations "detecting when a rotation speed of a spindle of the optical disk drive changes" and "calculating a target frequency of the DPLL signal for a target track
- 20 when the rotation speed of the spindle changes." Applicant believes that the new claim 19 has been placed in condition for allowance.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Sincerely yours,



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- 10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)